Feed the Future Country Fact Sheet

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Feed the Future Helps Address Water Insecurity in Nepal

Small Earth Nepal

The drip irrigation kits provide more efficien and sustainable irrigation to improve water security for farmers in Nepal.

Feed the Future is helping farmers in Nepal adapt new tools and systems to increase water security. In Nepal, over 70 percent of the population works in the agriculture sector and water is one of the most abundant natural resources in the region. Yet, Nepali farmers face water scarcity as they experience unpredictable rainfall patterns and increased frequency of extreme floods. Rapid melting of glaciers in the Himalayas has also reduced the amount of freshwater available to farmers.

To help improve water security in Nepal, the Feed the Future Innovation Lab for Adapting Livestock Systems to Climate Change, led by Colorado State University, has been working to introduce efficient bucket drip kit irrigation technology to water-insecure farmers in the Gandaki River Basin. The Basin is an important source of water for drinking and irrigation in Nepal.

Drought mapping shows that the Gandaki River Basin is becoming noticeably drier. As water scarcity intensifies, water-efficient technologies such as bucket drip irrigation are essential to maintain agricultural productivity and increase farmers' resilience to climate change.

Bucket drip irrigation ensures that every drop of water goes directly to the plant roots, irrigating more land with less water. The system also provides direct application of fertilizers and nutrients, reduces weed encroachment and lessens crop loss from wilting. Most importantly, this technology is helping farmers save time while increasing yields.

"I used to spend about an hour every morning watering my small kitchen garden, but now just five minutes is enough," says Durga Bhushal, a farmer from Kapilvastu. "It saves about half of the water. The bucket technology is very simple, and my children can also use it in our garden."

Bhushal notes that she and other women farmers at the 25 research sites view themselves as role models for fellow villagers. Through women's cooperatives established by the Innovation Lab, farmers receive training on assembling the drip system with the expectation that they can build an enterprise for themselves.

This project aims to help scale up drip technology and get it into the hands of more farmers. Local companies are considering producing the entire system in order to make the kit more affordable, as well as building partnerships with the women's cooperatives to expand production throughout Nepal. In addition, other U.S. Government-supported projects in Nepal are incorporating the technology into their strategies.

Through collaboration with these and other partners, Feed the Future can reach more farmers in need and provide the water system technology necessary to combat increasing water insecurity due to climate change.